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- COMMITTED TO PROTECTION OF THE ENVIRONMENT -

Final Decision Document for Element Two of the CERCLA Hazardous Wastes Interim Response Action at the Rocky Mountain Arsenal

Version 1.0

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ROY F. WESTON, INC.
215 Union Boulevard, Suite 550
Lakewood, Colorado 80228

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SHOULD BE REFERRED TO THE PROGRAM MANAGER
FOR THE ROCKY MOUNTAIN ARSENAL

TABLE OF CONTENTS

Section Title

1 INTRODUCTION

2 BACKGROUND

3 INTERIM RESPONSE ACTION OBJECTIVES

4 INTERIM RESPONSE ACTION ALTERNATIVES
4.1 On-Site Storage
4.2 On-Site/Off-Site Treatment
4.2.1 Incineration
4.2.1.1 On-Site Incineration
4.2.1.2 Off-Site Incineration
4.3 On-Site/Off-Site Land Disposal
4.3.1 On-Site Chemical Waste Landfill
4.3.2 Off-Site Chemical Waste Landfill

5 COMPARISON OF ALTERNATIVES
5.1 Introduction
5.1.1 Overall Protection of Human Health and the Environment
5.1.2 Compliance with ARARs
5.1.3 Reduction of Toxicity, Mobility, or Volume
5.1.4 Short and Long Term Effectiveness
5.1.5 Implementability
5.1.6 Cost
5.2 Comparison of Alternatives
5.2.1 On-Site Storage
5.2.2 On-Site Incineration
5.2.3 Off-Site Incineration
5.2.4 On-Site Chemical Waste Landfill
5.2.5 Off-Site Chemical Waste Landfill
5.3 Preferred Alternatives
5.4 Consistency With the Final Response Action

6 CHRONOLOGY OF EVENTS

7 IRA PROCESS

8 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
8.1 Definition of Terms
8.2 ARARs for Selected Alternatives
8.2.1 Chemical-Specific Requirements
8.2.2 Location-Specific Requirements
8.2.3 Action-Specific Requirements

9 REQUIREMENTS TO BE CONSIDERED
9.1 PCB Spill Cleanup Policy
9.1.1 Cleanup of Low-Concentration Spills
9.1.2 Cleanup of High-Concentration Spills
9.1.2.1 Cleanup of Restricted Access Areas
9.1.2.2 Cleanup of Outdoor Electrical Substations and Nonrestricted Access
Area 9.2 Target Decontamination Goals

10 REFERENCES

LIST OF TABLES

Table No.	Title
5-1	Comparison of Estimated Cost of PCB Disposal Alternatives
5-2	Summary of the Comparison of Alternatives
8-1	Location-Specific ARARs for PCB Removal IRA
8-2	Action-Specific ARARs for PCB Removal IRA
9-1	Target PCB Cleanup Standards Based on Precedents and Policies

ACRONYMS

ARAR	applicable or relevant and appropriate requirement
CERCLA Act	Comprehensive Environmental Response, Compensation, and Liability
CFR	Code of Federal Regulations
cm[2]	square centimeters
EPA	U.S. Environmental Protection Agency
FFA	Federal Facility Agreement
IRA	Interim Response Action
NCP	National Contingency Plan
NIOSH	National Institute of Occupational Safety and Health
O&M	Operation and Maintenance
OSHA	Occupational Safety and Health Administration
PCB	polychlorinated biphenyls
PPE	personal protective equipment
ppm	parts per million
RCRA	Resource Conservation and Recovery Act
RI/FS	remedial investigation/feasibility study
RMA	Rocky Mountain Arsenal
TBC	to be considered
TSCA	Toxic Substance Control Act

SECTION 1

INTRODUCTION

This Decision Document outlines remediation and management alternatives to coordinate disposal options for polychlorinated biphenyls (PCB) wastes at the Rocky Mountain Arsenal (RMA) under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) activities. This Decision Document selects specific disposal options associated with Element Two under the expansion of the Pretreatment of CERCLA Liquid Wastes Interim Response Action (IRA 13). Element Two includes the approval of management options relating to remediation of selected equipment and sites contaminated with PCB wastes.

Section 2 of this Decision Document provides a brief overview of the Interim Response Action (IRA) currently being conducted at RMA, including an expansion of the original IRA to include three additional elements. In July 1993, WESTON received authorization to remediate approximately 400 additional buildings and approximately 400 additional pieces of equipment under a separate delivery order. Section 3 identifies the objectives of Element Two of this IRA expansion. Section 4 identifies potential alternatives that are applicable to the disposal of the wastes generated under Element Two. A description of the preferred or selected disposal alternative, and the evaluation process used to support this selection, as background is provided in Section 5. Information including a list of chronological events is presented in Section 6, and the IRA process for Element Two is identified in Section 7. A brief discussion of applicable or
relevant and appropriate requirements (ARARs) is included in Section 8. Additional requirements to be considered are discussed in Section 9.

SECTION 2

BACKGROUND

The "Pretreatment of CERCLA Liquid Wastes IRA" is being conducted as part of the IRA Process for RMA in accordance with the June 5, 1987, report to the court in United States versus Shell Oil Co., the proposed Modified Consent Decree dated June 7, 1988, and the Federal Facility Agreement (FFA) dated February 17, 1989.

After the alternatives were reviewed according to the criteria listed in the above referenced documents, a new wastewater treatment system was chosen as the best solution for this IRA. Implementation of this IRA began in August 1991, and the new wastewater treatment system was constructed and began operating in July 1992. On January 14, 1992, RMA submitted a Technical Study to U.S. Environmental Protection Agency (EPA) Region VIII for an expansion of the CERCLA Liquid Wastes IRA. The Technical Study proposed to amend the "Pretreatment of CERCLA Liquid Wastes IRA" of the FFA to encompass a broader range of wastestreams and waste management activities for both on-post and off-post operable units. The expansion has three elements:

- Element One - Management options for disposal and/or treatment of hazardous waste that has been or will be placed in storage areas at RMA, and that has not been addressed in another IRA. Wastestreams include: remedial investigation/feasibility study (RI/FS) wastes; IRA wastes; miscellaneous waste from vehicle, grounds, and building maintenance; and items found on post.

- Element Two - Approval of management options relating to remediation of selected equipment and sites contaminated with PCB wastes. This expansion creates a mechanism for coordinating activities prior to the remediation or disposal of such PCB items and PCB wastes.

- Element Three - Selection and approval of an on-site facility for managing solids that are bulk hazardous wastes. These wastes primarily consist of contaminated soil and building rubble and must be managed appropriately until final remedial action decisions are made.

This Decision Document only addresses Element Two.

SECTION 3

INTERIM RESPONSE ACTION OBJECTIVES

The overall objectives of IRAs are to select alternatives that are: protective of human health and the environment; cost effective; and timely. The selected alternatives, to the maximum extent practicable, should also: be consistent with and contribute to the effective performance of Final
ResponseActions; attain ARARs; and be compatible with final remediation decisions in the Records of Decision.
The objective of Element Two of this IRA expansion is to develop and implement management options for remediating selected equipment and selected sites contaminated with PCB wastes. Element Two also creates a mechanism for coordinating activities prior to the remediation or disposal of such PCB items and PCB waste.

There will be several different types of PCB-contaminated wastes addressed by this IRA. The types of wastes that may result from clean-up actions could include the following:

- PCB-contaminated solid wastes to include excavated soil and asphalt as well as powdered concrete material generated from scabbling activities.

- PCB-contaminated liquid waste to include equipment lubricating and hydraulic oils and solvents used to decontaminate the equipment.

- Personal protective equipment (PPE) potentially contaminated with PCB (tyvek suits, gloves, booties, respirator cartridges, etc.).

All waste storage and disposal activities will be conducted in compliance with all applicable federal requirements. The State does not have authority for PCB regulations.

The activities involved in the PCB IRA will include the removal of PCB liquids and sludges from the interior and exterior surface areas of specific industrial equipment, floor, contaminated soil and paving material, and other debris. The PCB IRA further includes post-cleanup sampling to verify the level of cleanup, relocation of decontaminated equipment, and disposal of PCBcontaminated material. Initially, the PCB IRA was meant to address only three sites: Building 321 (Coal Pulverizers/Electric Motor Assemblies); Building 1703 (LeBlonde USA Large Lathe and Hydraulic Press); and Facility No. 621B (Storage Pad, Salvage Yard). A detailed description of these sites and remedial activities relating to these sites is found in the Implementation Letter which will be sent to regulatory agencies by the PMRMA.

In July 1993, WESTON received authority by the PMRMA to expand the PCB IRA to include the investigation of approximately 400 additional buildings and approximately 400 additional pieces of equipment. These additional buildings and pieces of equipment were identified by EBASCO and published in the Draft Final Inventory Report, Polychlorinated Biphenyl (PCB) Inventory, Volumes I, II, and III (EBASCO, 1991). These additional buildings and pieces of equipment and remedial activities relating to them will be described and detailed in a separate Implementation Letter. Currently, the PMRMA has not identified which of these additional buildings or pieces of machinery need to be addressed in the PCB IRA.

SECTION 4

INTERIM RESPONSE ACTION ALTERNATIVES

Potential alternatives have been identified for this IRA based upon the treatment and disposal options that are available for the various waste streams that were identified in Section 3. Presented in this section are the potential alternatives that represent distinct, viable approaches to managing site problems: storage in an on-site facility; treatment in an on-site or off-site facility; and land disposal in an on-site or off-site facility. These alternatives constitute routine management and disposal options common to widespread industry practices in compliance with the Resource Conservation and Recovery Act (RCRA) and the Toxic Substances Control Act (TSCA).

4.1 ON-SITE STORAGE

PCB-contaminated waste removed and drummed during remediation processes can be stored on site as a management option until a final treatment or disposal alternative is identified. On-site storage of PCB-contaminated waste cannot exceed 1 year according to 40 CFR 761.65(a). This waste must be stored in a unit that is designed and operated in compliance with ARARs, including, but
not limited to, the substantive requirements of TSCA, such as those found at 40 CFR 761.65 addressing PCB storage.

4.2 ON-SITE/OFF-SITE TREATMENT

Treatment response actions reduce or eliminate the toxicity, mobility, or volume of a chemical constituent of a waste by altering the chemical structure or bonding with, isolating, or destroying the contaminant. Treatment alternatives for PCB-contaminated wastes include incineration, solidification, biodegradation, and chemical dechlorination. Of these, only incineration is a demonstrated practical alternative for small volumes of PCB contaminated liquids.

4.2.1 Incineration

Thermal destruction of PCB-contaminated waste would destroy the waste constituent permanently. This process would eliminate the risk of the contaminant becoming released into the environment and prevent any long term liability. All incinerators used in the destruction of PCBs must be in
compliance with TSCA. Incinerators accept all concentrations of PCB liquid wastes, unlike chemical waste landfills which accept PCB concentrations of 500 parts per million (ppm) or less.

4.2.1.1 On-Site Incineration

A mobile incinerator could be transported to RMA for PCB destruction. This alternative allows for the most effective treatment of IRA wastes without the time needed to construct the unit. The incinerator would be subject to TSCA requirements including those of 40 CFR 761.70 which specify a destruction efficiency of 99.9999 percent as well as other design, operation, and operation specifications.

4.2.1.2 Off-Site Incineration

PCB-contaminated liquids and solids generated by the activities of this IRA could be transported off-site to a commercial TSCA incinerator. Since this activity involves the off-site transfer of a CERCLA hazardous substance, the CERCLA S 121(d)(3) Off-Site Policy requirement for EPA to approve the off-site facility must be met. In addition, all regulations applicable to the off-site actions (rather than ARARs) must be complied with.

4.3 ON-SITE/OFF-SITE LAND DISPOSAL

All chemical waste landfills accepting PCBs must be in compliance with TSCA and can not accept liquid waste containing PCB concentrations greater than 500 ppm unless stabilization or solidification was occurred prior to disposal (40 CFR 761.75[b][8]). On-site and off-site land disposal options are discussed below.

4.3.1 On-Site Chemical Waste Landfill

RMA could design and construct a landfill on site in compliance with TSCA. Using TSCA regulations of 40 CFR 761.75 as ARARs, the landfill would require a liner over very low permeability clay soils, monitoring systems for groundwater and surface water, a leachate collection system, and must comply with various locational restrictions.

4.3.2 Off-Site Chemical Waste Landfill

PCB-contaminated solids generated by the activities of this IRA could be transported off-site to a commercial TSCA chemical waste landfill. Since this activity involves the off-site transfer of a CERCLA hazardous substance, the CERCLA S 121(d)(3) Off-Site Policy requirement for EPA to approve the off-site facility must be met. In addition, all regulations applicable to the off-site actions (rather than ARARs) must be complied with.

SECTION 5

COMPARISON OF ALTERNATIVES

5.1 INTRODUCTION

Each of the alternatives described in Section 4 is compared in the following text against these primary criteria as a basis for a qualitative evaluation:

- Overall Protection of the Human Health and the Environment.
- Compliance with Applicable or Relevant and Appropriate Requirements (ARARs).
- Reduction of Toxicity, Mobility, or Volume (TMV).
- Short and Long Term Effectiveness.
- Implementability.
- Cost.

5.1.1 Overall Protection of Human Health and the Environment

This primary criteria provides a final check to assess whether each alternative offers adequate protection of human health and the environment. The overall assessment of protection draws on the assessments conducted under evaluation criteria, especially short and long term effectiveness and
compliance with ARARs.

5.1.2 Compliance with ARARs

This evaluation criterion is used to determine whether each alternative will meet all of its Federal and State ARARs (as defined in CERCLA S 121) that have been identified in previous stages of the Remedial Investigation/Feasibility Study process. Section 8 of this document summarizes the ARARs for this IRA. Additional requirements which may need to be considered are discussed in Section 9.

5.1.3 Reduction of Toxicity, Mobility, or Volume

This criteria addresses the actions that utilize treatment technologies that permanently and significantly reduce the toxicity, mobility, or volume of the identified waste by the destruction of toxic contaminants, reduction of the total mass of toxic contaminants, irreversible reduction in contaminant mobility, or reduction of total volume of contaminated media.

5.1.4 Short and Long Term Effectiveness

This evaluation criterion involves investigation of the effects of the alternative during construction and implementation, and consideration of the risks that remain after the site has been remediated. In general, items of concern would include the protection of the community and workers during implementation of remedial measures, potential environmental impacts, adequacy of controls that are used to manage treatment residuals or untreated wastes, etc. The principal measure of the effectiveness of an alternative for the purposes of this decision document will be the degree to which the alternative provides for a permanent remedy for the materials.

5.1.5 Implementability

This criterion establishes the technical and administrative feasibility of implementing an alternative. Technical aspects evaluated for each of the alternatives include construction and operation activities, reliability of the technologies involved, ease of undertaking additional remedial action, as appropriate, and monitoring after completion of activities. Administrative concerns include establishing contact with appropriate agencies to implement remedial actions (e.g., coordinating with agencies to construct and operate a treatment unit). Availability of

materials and equipment needed is another factor that must be considered when evaluating implementability of an alternative. The principal measure of the implementability of an alternative for the purposes of this decision document will be the relative ease with which the alternative provides a means by which to treat, store, and/or dispose of the PCB materials generated by the activities of this IRA.

5.1.6 Cost

A remedial cleanup program must be implemented and operated in a cost-effective manner must mitigate the environmental and human health concerns at the site. In considering the cost-effectiveness of the various alternatives, the following categories types of costs are briefly evaluated:

- Facility costs, including the costs of design, construction, mobilization, etc. associated with the installation of the alternative.

- Operation and Maintenance (O&M)/disposal costs, including the costs of post-construction activities that ensure effective implementation of the remedy. Included in the O & M costs are also the costs associated with any necessary sampling and analysis or monitoring of the remedy. For the purposes of the evaluation presented in this document, O & M/disposal costs also include the direct cost of off-site treatment and/or disposal of wastes, since both facility costs and O & M costs are incorporated in commercial facility treatment/disposal rates.

Table 5-1 presents a comparison of the estimated costs of the alternatives. The volumes of material slated for disposal were derived from information contained in EBASCO's Draft Final Volumes I, II, and III Inventory Report PCB Inventory (EBASCO, 1991). The volumes also include estimates of material that will be generated from work associated with the latest expansion of the PCB IRA.

5.2 COMPARISON OF ALTERNATIVES

5.2.1 On-Site Storage

On-site storage accomplishes the immediate objective of storing the PCBs in a timely manner, allowing their removal from existing locations and eliminating them as a potential threat to human health and environment. However, long-term storage requires that a storage unit be

provided and maintained until the stored materials can be disposed, in addition to providing a potential risk for release while materials are stored. Long-term storage on site cannot exceed 1 year, according to 40 CFR 761.65(a); therefore, it necessitates moving the materials again at some point in the future and so the alternative offers little permanence. If facilities are available at RMA for the storage of these materials, the alternative could be implemented relatively easily. The relative cost of managing the waste on site is also somewhat high (Table 5-1).

5.2.2 On-Site Incineration

The advantages to stationing the incinerator on site would be that hazardous waste transportation liabilities and costs would be eliminated and that RMA personnel or contractors could manage the incinerator instead of relying on the expertise of an outside company. Several drawbacks that exist when employing mobile incineration as an alternative include: on-site incineration is not cost effective for the small quantities of PCBs; and may not be feasible in a timely manner.

On-site incineration is effective in that it provides for a permanent elimination of the PCB contaminants. This alternative is not easily implementable because of the difficulty and duration of the activities necessary to bring the mobile incinerator on-line and ready to treat the IRA wastes. When the costs of using the on-site incinerator alternative are compared with those of the other alternatives, this alternative is found to be relatively more expensive.

5.2.3 Off-Site Incineration

Off-site incineration is a suitable alternative to employ in part because the off-site incinerator would possess a current TSCA permit for destroying PCB-contaminated wastes. However, some risks can be associated with off-site transportation of wastes.

This alternative is effective in that it provides for a permanent elimination of the PCB contaminants. Off-site incineration is very easily implementable since, although IRA wastes might be temporarily stored pending destruction, the wastes merely need to be sent to an existing commercial incineration facility that is currently incinerating other similar wastes. The relative cost of the alternative is lower than the other alternatives except off-site landfilling.

5.2.4 On-Site Chemical Waste Landfill

An on-site landfill would eliminate hazardous waste transportation liabilities and costs, and the RMA would retain control and manage the landfill. Disadvantages to this alternative include: the significant costs and time necessary to design and construct a TSCA landfill; the liability of
not destroying the IRA wastes that are to be placed in the landfill; and the limitation under TSCA that it not accept liquid wastes that contain PCBs at concentrations greater than 500 ppm. In addition, pretreatment and/or stabilization to eliminate the presence of free liquids will add cost and time in disposing of liquid wastes on site.

This alternative is effective in that it provides for a permanent disposal, although not destruction, of the PCB contaminants. The alternative is not very implementable because of the difficulty and duration of the activities necessary to make the chemical waste landfill ready to accept the IRA wastes. When estimated costs are compared, the relative costs associated with this alternative are high, second only to on-site incineration.

5.2.5 Off-Site Chemical Waste Landfill

Off-site landfilling is cost-effective and expeditious, given the small quantity of material involved; however, the RMA maintains liable for the disposal of PCBs and their disposal long after the chemical waste landfill is closed. In addition, wastes containing greater than 500 ppm PCBs cannot be disposed of in a land disposal facilities; this may limit the utility of this option.

This alternative is effective in that it provides for a permanent disposal, although not destruction of the PCB contaminants. Off-site disposal in a chemical waste landfill is very easily implementable since the wastes merely need to be sent to an existing commercial facility that is currently landfilling other similar wastes. The relative cost of the alternative is lower than all the other alternatives.

5.3 PREFERRED ALTERNATIVES

Table 5-2 presents a summary of the results of the comparison performed in Section 5.2. As can be seen in the table, off-site incineration and off-site landfilling are the most preferable alternatives for disposal of the IRA-generated PCB-contaminated wastes. Because incineration offers the desirable benefit of destroying the PCB contaminants of concern, it will be used wherever practicable. Contaminated liquids and solid material are very amenable to incineration; however, incineration of similarly contaminated solids generally less desirable since the cost of such treatment is commonly much higher.

5.4 CONSISTENCY WITH THE FINAL RESPONSE ACTION

This Decision Document outlines management alternatives, as well as mechanisms, to coordinate disposal options for hazardous wastes generated at RMA as a result of CERCLA activities. This IRA was developed to be consistent with and contribute to a final response action's efficient performance throughout the remainder of the remedial action process at RMA.

SECTION 6

CHRONOLOGY OF EVENTS

The significant events pertaining to Element Two of the expanded CERCLA Liquid Wastes IRA are presented below.

Date	Event
Summer 1984	In support of activities conducted under RI and IRA programs at RMA, storage of wastes in warehouses began.
June 1987	State of Colorado, Shell Oil Company, EPA, and U.S. Army agreed that certain IRAs would be conducted.
February 1988	Proposed consent decree lodged in the case of United States versus Shell Oil Company with the U.S. District Court in Denver, Colorado. The consent decree specified 13 interim actions, including the CERCLA Liquid Wastes IRA, to facilitate remediation activities.
June 1988	Proposal modified Consent Decree.
February 1989	FFA was developed to establish a procedure by which the organizations would cooperate in the assessment, selection, and implementation of Response Actions resulting from the release or threat of release of hazardous substances, pollutants or contaminants at or from the Arsenal. (Prior to the effective data of the FFA, participation by the Army, EPA, Department of the Interior, Agency for Toxic Substances and Disease Registry, and Shell in the RI/FS and IRAs were governed by the February 1988 and June 1988 proposed Consent Decrees.)
June 1989	Formal Waste Management Program for storing investigation-derived wastes began.
June 1990	Final IRA Decision Document for CERCLA Liquid Wastes IRA.
June 1991	Final IRA Implementation Document was issued and construction began.
January 14, 1992	Final Technical Study document regarding a proposed Technical Study for an expansion of the CERCLA Liquid Wastes IRA to include three new elements (Hazardous Waste Disposal, PCB Waste Disposal, and Bulk Waste Management) was submitted to EPA Region VIII. The FFA requirements of paragraph 22.16 were followed in the modification of the CERCLA IRA.
Spring 1993	Draft Decision Document submitted to regulatory agencies.

SECTION 7

IRA PROCESS

The process for Element Two of this IRA is as follows:

1. Opportunities for public participation in the development and approval of Element Two of this IRA expansion will be provided before issuance of the Decision Document. There will be notice and opportunity for written comment on the Draft Decision Document; however, a public meeting will not be scheduled. After the close of the comment period for this draft final version, a final version will be prepared.

2. The Draft Final Decision Document will be subject to dispute resolution. At the close of the period for invoking dispute resolution, if dispute resolution is not invoked, or after the completion of dispute resolution, the Army shall issue a Final Decision Document.

3. After the issuance of the Final Decision Document, each specific proposal for disposing and/or treating PCB items or waste, or for the remediation of selected PCB equipment or sites, will be initiated with an Implementation Letter to the regulatory agencies. This letter will describe: the PCB waste site or equipment involved; the origin and storage site of the waste; and the alternative from the Final Decision Document that will be used (including the method and location of disposal and/or treatment and/or remediation). Any organization wishing to invoke dispute resolution regarding an Implementation Letter must do so within 30 calendar days after receiving the document.

4. As Lead Party for the design and implementation of this IRA, the Army will prepare the Implementation Letter, as described above, and will be responsible for implementing the IRA in accordance with the IRA Implementation Letter.

SECTION 8

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Attaining applicable or relevant and appropriate requirements (ARARs) to the maximum extent practicable when performing IRAs is required by Section 22.6 of the FFA. This section defines the ARARs for the alternatives described in Section 5.

8.1 DEFINITION OF TERMS

"Applicable requirements," as defined in 40 CFR 300.5, mean:

those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site. Only those state standards that are identified by a state in a timely manner and that are more stringent than federal requirements may be applicable.

"Relevant and appropriate requirements," also defined in 40 CFR 300.5, mean:

those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws, that, while not 'applicable' to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards that are identified in a timely manner and are more stringent than federal requirements may be relevant and appropriate.

According to CERCLA S 121(d)(2), in order to be considered an ARAR, a state requirement must have been "promulgated." As defined in 40 CFR 300.400(g)(4) of the National Contingency Plan (NCP), the term "promulgated" means that the requirement is of general applicability and is legally
enforceable.

In general, there are three categories of ARARs. These categories are:

- Ambient or chemical-specific requirements.
- Location-specific requirements.
- Performance, design, or other action-specific requirements.

Each category is discussed in more detail in the following paragraphs.

Ambient or chemical-specific requirements set health- or risk-based concentration limits in various environmental media for specific hazardous substances or pollutants. These requirements set protective cleanup levels for the chemicals of concern in the designated media, or may act as action-related requirements in indicating a safe level of air emission or
wastewater discharge.

Location-specific ARARs are limits placed on the concentration of hazardous substances or the conduct of activities solely because they occur in certain locations. These may restrict or preclude certain remedial actions or may apply only to certain portions of a site. Examples of location-specific ARARs that pertain to the IRA are federal and state siting laws for hazardous waste facilities (40 CFR 264.18, fault zone, and floodplain restrictions), and federal regulations requiring that actions minimize or avoid adverse effects to wetlands (40 CFR Part 6 Appendix A and 40 CFR Parts 230-231).

Performance, design, or other action-specific requirements set controls or restrictions on particular kinds of activities related to management of hazardous substances or pollutants. These requirements are not triggered by the specific chemicals present at a site, but rather by the particular IRA activities that are part of this plan. Action-specific ARARs are technology -based performance standards, such as the Best Available Technology standard of the Federal Water Pollution Control Act. Other examples include RCRA treatment, storage, and disposal standards, and Clean Water Act pretreatment standards for discharges to publicly owned treatment works.

RCRA land disposal restrictions for certain contaminants (40 CFR Part 268.40) are also action-specific ARARs for the disposal of secondary wastes generated during water treatment. Any wastes, hazardous or not, are subject to CERCLA section 121(d)(3), also known as the "off-site policy." The "offsite policy" requires that CERCLA wastes be shipped off site only to facilities in compliance with applicable federal and state laws.

As explained in the NCP (see 55 FR 8666), Occupational Safety and Health Administration (OSHA) requirements for worker protection in hazardous waste operations and emergency response (29 CFR 1910.120) are applicable to workers involved in hazardous substance-related activities, as well as other OSHA requirements related to specific circumstances or activities. Even though these requirements are not environmental in nature, and therefore, are not considered ARARs, they must be satisfied. However, because these requirements are not ARARs, they will not be further addressed in this decision document.

8.2 ARARs FOR THE SELECTED ALTERNATIVES

The following subsections identify the ARARs that will be attained to the maximum extent practicable in performing this IRA.

8.2.1 Chemical-Specific Requirements

This IRA is intended to mitigate the threat posed to human health and the environment by a single contaminant, namely PCBs. These PCBs have been identified in and around certain equipment and in contaminated asphalt and soils. Under these conditions, there are no chemical-specific requirements for the environmental medium of concern, namely soils, that must be attained. There are, however, a number of ARARs that must be addressed for the PCBs as a result of actions to be taken as a part of this IRA. These ARARs are identified in Section 8.2.3 as action-specific requirements.

8.2.2 Location-Specific Requirements

The FFA, in Sections 44.2(e) and (f), specifically addresses location-specific requirements and provides that:

Wildlife habitat(s) shall be preserved and managed as necessary to protect endangered species of wildlife to the extent required by the Endangered Species Act, 16 U.S.C. Sections 1531 et seq., migratory birds to the extent required by the Migratory Bird Treaty Act, 16 U.S.C. 703 et seq., and bald eagles to the extent required by the Bald Eagle Protection Act, 16 U.S.C. Section 668 et seq.

Other than as may be necessary in connection with a Response Action or as necessary to construct or operate a Response Action Structure, there shall be no change permitted in the geophysical characteristics of RMA that has a significant effect on the natural drainage at RMA for floodplain management, recharge of groundwater, operation and maintenance of Response Action Structures, and protection of wildlife habitat(s).

The activities of this IRA will be carried out in accordance with the FFA. As provided by the Endangered Species Act, the U.S. Fish and Wildlife Service will be consulted regarding anticipated IRA activities to ensure that these activities are protective of wildlife.

In addition to the provision in the FFA, several requirements exist that pertain to the protection and management of floodplains and wetlands. These requirements include: Executive Order 11988 (44 FR 43239, July 24, 1979); regulations promulgated pursuant to the National Environmental Policy Act; 40 CFR Part 6; 40 CFR 264.18(b); and 40 CFR 761.65(b). IRAs may require the use of temporary storage areas for contaminated materials. The temporary storage areas may have to be constructed for this purpose. The siting of any such storag structure will be protective of floodplains and wetlands to greatest extent practicable. If possible, this IRA will make use of existing RMA facilities for the temporary storage of PCB-contaminated materials.

Other location-specific requirements that the IRA will attain to the greatest extent practicable are identified in Table 8-1.

8.2.3 Action-Specific Requirements

As discussed in Section 5, this IRA generally involves on-site activities relating to the decontamination of PCB-contaminated equipment and surfaces as well as the removal of PCB-contaminated asphalt and soil. Accordingly, these on-site activities are controlled almost exclusively by the substantive requirements of TSCA and the regulations found in 40 CFR Part 761. Action-specific requirements provided by TSCA and its associated regulations are summarized in Table 8-2.

Although not anticipated, if RCRA hazardous wastes are generated as a part of the IRA, the substantive hazardous waste requirements of 40 CFR Parts 260 to 268 and the correlating Colorado Hazardous Waste Regulations, when stated as more stringent than RCRA, will become action-specific ARARs. Especially noteworthy among these regulations is the requirement of the land disposal
restrictions (40 CFR 268.32) requiring that liquid hazardous wastes containing PCBs in concentrations greater than or equal 50 ppm be treated prior to land disposal. Because hazardous waste generation is not intended to be a part of this IRA, no further discussion of the RCRA requirements as action-specific requirements is needed in this decision document.

SECTION 9

REQUIREMENTS TO BE CONSIDERED

In addition to ARARs, EPA has developed a category of requirements known as "to be considered" (TBCs). This includes nonpromulgated criteria, advisories, guidance documents, and proposed standards issued by federal andstate governments. The PCB Spill Cleanup Policy (40 CFR 761, Subpart G) is a TCB for this IRA.

9.1 PCB SPILL CLEANUP POLICY

The PCB Spill Cleanup Policy establishes criteria EPA will use to determine the adequacy of cleanup for PCB spills at greater than or equal to 50 ppm PCB, occurring after May 4, 1987, and where reporting and cleanup is initiated within 24 hours. Whenever a PCB-contaminated area is discovered and not cleaned up within the period specified in the cleanup policy or the spill is an existing spill, EPA must approve the cleanup plan on a case-by-case basis. The PCB spills at the RMA are existing spills, spills which occurred prior to May 4, 1987, and are excluded from this policy. As such, the EPA must approve the cleanup plan on a case-by-case basis following general guidelines established by each EPA regional office. With the exemption for time cleanup, regulatory requirements for the cleanup of PCB spills have never been established. However, this policy does establish guidelines for spill cleanup and can be used as a general framework for this IRA. The following describes the PCB Spill Control Policy.

There are two types of PCB spills. "Low concentration PCBs" are PCB spills that are tested and found to contain less than 500 ppm PCBs, or those materials that EPA assumes to beat concentrations between 50 and 499 ppm (i.e., untested mineral oil dielectric fluid). "High concentration PCBs" are PCB spills that contain greater than or equal to 500 ppm PCBs.

9.1.1 Cleanup of Low-Concentration Spills

Low concentration spills are spills with less than 1 pound of PCB material or less than 270 gallons of untested mineral oil. The following procedures must be performed:

- Solid surfaces must be double washed/rinsed; except that all indoor residential surfaces other than vault areas must be cleaned to 10 micrograms/100 square centimeters (cm[2]) as measured by standard commercial wipe tests.

- Soil within spill area must be excavated and the ground restored to its original configuration by backfilling with clean soil (soil containing less than 1 ppm PCBs). The excavated soil must include all visible traces of the spill plus a buffer of 1 lateral foot around the visible traces.

- This cleanup must be completed within 48 hours after the responsible party was notified or became aware of spill except for delays of emergency or adverse weather.

- The cleanup must be documented with records, which must be maintained for 5 years.

- Responsible party or designated agent certifies that cleanup requirements have been met and information in record is correct. The certification should be kept for 5 years.

9.1.2 Cleanup of High-Concentration Spills

High concentration spills are spills that contain PCB oil greater than or equal to 500 ppm or low-concentration spills involving 1 pound or more PCB materials (270 gallons or more of untested mineral oil). The following procedures must be performed:

- The cleanup must be initiated within 24 hours (or within 48 hours for PCB transformers) after responsible party was notified or became aware of spill except for delays of emergency or adverse weather.

- Notify the National Response Center and the EPA Regional Office if the spill is 10 pounds or more PCB by weight. Spills of 10 pounds or less must be cleaned up in accordance with this policy, but EPA notification is not required. Notifications must be made within 24 hours of discovery.

- Cordon off or restrict the area encompassing any visible traces of spill material plus a 3-foot buffer beyond visible traces. Place clearly visible signs advising persons to avoid area.

- Record and document the area of visible contamination. Note the extent of the visible trace area and center of the visible trace area. If there are no visible contamination, this should benoted and the EPA Regional office contacted for guidance in completing statistical sampling of the spill area to establish spill boundaries.

- Initiate the cleanup of visible traces of fluid on hard surfaces and the removal of visible traces of contamination on soil and other media.

- If there was delay in reaching site and there are insufficient visible traces of PCBs remaining at the spill site, the responsible party must estimate the area of the spill and immediately cordon off the area of suspect contamination. The responsible party must then utilize a statistically based sampling scheme to identify the boundaries of the spill area as soon as practicable.

- EPA, while not placing a time limit on the cleanup completion, expects the decontamination and cleanup to be achieved promptly in all cases and will consider promptness of completion when determining if responsible party made good faith efforts to cleanup spill in accordance with this policy.

- Records must include information as requested in 40 CFR 761.125(c)(5).

9.1.2.1 Cleanup of Restricted Access Areas

Additional standards for Restricted Access Areas apply as per 40 CFR 761.125(c)(3), including the following:

- Verify by post-cleanup sampling.

- High-contact solid surfaces = 10 micrograms/100 cm[2].

- Low-contact, indoor, impervious solid surfaces = 10 micrograms/100 cm[2]

- Low-contact, indoor, nonimpervious solid surfaces = 10 micrograms/100 cm[2] or 100 micrograms/100 cm[2] and encapsulated.

- Low-contact, outdoor surfaces (impervious/nonimpervious) = 100 micrograms/100 cm[2].

- Contaminated soil = 25 ppm.

9.1.2.2 Cleanup of Outdoor Electrical Substations and Nonrestricted Access Areas

There are additional requirements which must be met for spills at outdoor electrical substations and for spills in nonrestricted access areas as defined in 40 CFR 761.125(c)(2) and 40 CFR 761.125(c)(4).

9.2 TARGET DECONTAMINATION GOALS

The target decontamination goals for the PCB IRA will be based on the PCB cleanup standards established from precedents and policies (Table 9-1).

SECTION 10

REFERENCES

EBASCO Services, Inc., et al. 1991. Litigation Technical Support and Services, Rocky Mountain Arsenal Draft Final Volume I, Draft Final Volume II, and Final Volume III Inventory Report, Polychlorinated Biphenyl (PCB) Inventory, May 1991.

DEPARTMENT OF THE ARMY
PROGRAM MANAGER FOR ROCKY MOUNTAIN ARSENAL
COMMERCE CITY COLORADO 80022 -1748

September 23, 1993

REPLY TO
ATTENTION OF:
Interim Response Branch

Mr. Connally Mears
U.S. Environmental Protection Agency Region VIII
Mail Code 8HWM-FF
999-18th Street, Suite 500
Denver, Colorado 80202-2466

Dear Mr. Mears:

This letter serves to advise you of the finalization of the Decision Documents for the PCB and UST Interim Response Actions at Rocky Mountain Arsenal. Since no dispute was raised, the Draft Final Decision Documents that were issued on June 4, 1993, will serve as the Final Decision Documents. Due to typographical errors in the PCB and UST Draft Final Decision Documents, the Final Decision Documents with the appropriate white covers and corrections are enclosed. No technical changes were made to either Draft Final Decision Document.

Point of contact for this action is Mr. Bruce M. Huenefeld at (303) 289-0239.

Sincerely,

Charles T. Scharmann
RMA Committee Coordinator

Enclosure